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Atorneys for Defendant/Counter-Plaintiff,  
Keating Dental Arts, Inc.

**IN THE UNITED STATES DISTRICT COURT  
FOR THE CENTRAL DISTRICT OF CALIFORNIA  
SOUTHERN DIVISION**

JAMES R. GLIDEWELL DENTAL  
CERAMICS, INC. dba  
GLIDEWELL LABORATORIES,

Plaintiff/Counter-defendant,  
v.

KEATING DENTAL ARTS, INC.

**Defendant/Counter-Plaintiff:**

Civil Action No.  
SACV11-01309-DOC(ANx)

## **EXPERT REPORT OF DR. DAVID W. EGGLESTON**

Honorable David O. Carter, USDJ  
Honorable Arthur Nakazato, USMJ

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3                   **I. STATEMENT OF WORK**

4                   In August 2012 I was contacted by Knobbe, Martens, Olson & Bear,  
5 counsel for Keating Dental Arts, Inc., to provide my perspective on the use of  
6 "bruxer," "bruxism," "bruxzir" and similar terms within the dental industry.

7  
8                   **II. STATEMENT OF QUALIFICATIONS**

9                   I graduated from the University of Southern California (USC) School of  
10 Dentistry in 1970 receiving the Daniel Cave Memorial Award and the Lewis E.  
11 Ford Memorial Award for achievements in prosthodontics. Additionally, I was  
12 elected to the ATE and OKU honorary dental fraternities.

13                  After graduation, I continued at the USC School of Dentistry with a  
14 residency in the specialty of prosthodontics, and received my Prosthodontics  
15 Certification in 1972 and the American Board of Prosthodontics Certification in  
16 1975. After completing my residency at USC, I practiced prosthodontics at  
17 Bolling Air Force Base in Washington, D.C., achieving the rank of Major.

18                  Currently, I am on the faculty at the Ostrow School of Dentistry of USC as  
19 a Clinical Associate Professor and I serve as a member of the Board of  
20 Councilors. I lecture extensively throughout the United States and have given  
21 dental courses in Canada, Mexico, Europe, the South Pacific and the Middle East.

22                  I am active in many dental organizations and have served in the following  
23 capacities: President of the American Board of Prosthodontics, President of the  
24 American College of Prosthodontists, President of the Academy of  
25 Prosthodontics, President of the Pacific Coast Society for Prosthodontics,  
26 President of the ACP Education Foundation, and President of the ACP California  
27 Section; Associate Editor of the *Journal of Prosthodontics*; Chair of the ACP  
28 Prosthetic Dental Care Programs; Chair of the ACP National Peer Review

1 Committee; Consultant for the ADA Council on Scientific Affairs; Chair of the  
2 California Dental Association Council on Dental Research; Chair of the USC  
3 Dentistry Associates Board of Directors; Executive Councilor and Chair of the  
4 Program Committee for the Academy of Fixed Prosthodontics; Delegate to the  
5 Federation of Prosthodontic Organizations; Member of the Hoag Hospital 552  
6 Board of Directors; Member of the USC Orange County Planning Council. For  
7 the Orange County Dental Society, I have served as Secretary, Senior Delegate,  
8 Chair of the Continuing Education Programs Committee, and five years on the  
9 Board of Directors. I received the Hoag Hospital Vin Jorgensen Award, the  
10 American College of Prosthodontists Distinguished Service Award, and the  
11 American College of Prosthodontists Dan Gordon Memorial Award.

12 I maintain fellowships in the International College of Prosthodontists, the  
13 American College of Prosthodontists, the Academy of Prosthodontics, the Pacific  
14 Coast Society for Prosthodontics, the Pierre Fauchard Academy, the Academy of  
15 Dentistry International, the International College of Dentists, and the American  
16 College of Dentists.

17 I have published numerous articles in the dental literature and my research  
18 at the L.A. Coroner's Office on the correlation of mercury in brain tissue with  
19 dental amalgam received a reference citation by the World Health Organization.

20 The following is a list of my involvement in professional organizations and  
21 associations during my career:

22 **2002 – present** Consultant, California Board of Dental Examiners.

23 **1996 – present** Member, U.S.C. School of Dentistry Board of Councilors

24 **2010 – 2011** President, Academy of Prosthodontics.

25 **2009 – 2010** President Elect, Academy of Prosthodontics.

26 **2008 – 2009** Vice President, Academy of Prosthodontics.

27 **2009** Chair, Academy of Prosthodontics Scientific Program.

28 **2008** Chair, Academy of Prosthodontics Fellowship Committee.

- 1                   **2007** Chair, Academy of Prosthodontics Policy Committee.
- 2                   **2005-2008** Member, Council for the American Board of Prosthodontics.
- 3                   **2004-2007** Member, American Dental Association Commission on Dental  
4                   Accreditation's Appeal Board.
- 5                   **2001-2003** Member, Board of Directors Pierre Fauchard Academy, Southern  
California Section.
- 6                   **1998** The First American College of Prosthodontists Distinguished  
7                   Service Award.
- 8                   **1997-2001** Chair, Dentistry Associates Board of Directors, U.S.C. School of  
9                   Dentistry
- 10                  **1996** Chair, Academy of Prosthodontics 1996 Local Arrangements  
Committee.
- 11                  **1995-2000** Consultant, American Dental Association Council on Scientific  
12                  Affairs.
- 13                  **1995-1997** Member, American College of Prosthodontists Peer Review  
14                  Committee.
- 15                  **1995-1996** Member, Academy of Prosthodontics Oral Health and Dental  
Practice Committee.
- 16                  **1995-1996** Chair, Pacific Coast Society of Prosthodontists Membership  
17                  Committee.
- 18                  **1995-1996** Chair, American Academy of Fixed Prosthodontics Table Clinics  
19                  Committee.
- 20                  **1995-1996** Member, Pierre Fauchard Academy Credentials Committee.
- 21                  **1995-1996** Member, American College of Prosthodontists Ad Hoc Implant  
Program Subcommittee.
- 22                  **1995** Member, American College of Prosthodontists Education  
23                  Foundation Scholarship Committee.
- 24                  **1994-1998** Executive Councilor, Academy of Fixed Prosthodontics.
- 25                  **1994-1995** Member, International College of Prosthodontists Public and  
26                  Professional Relations Committee.
- 27                  **1994** Chairman, Annual Program Planning Committee, American  
Academy of Fixed Prosthodontics.
- 28

- 1           **1993-1997** Member, University of Southern California Orange County  
2           Planning and Development Council.
- 3           **1993-1996** Member, Board of Directors, University of Southern California  
4           Dentistry Associates.
- 5           **1993-1995** Chair, Academy of Prosthodontics Current Issues Committee.
- 6           **1993-1994** Chair, Pacific Coast Society of Prosthodontists Policy  
7           Committee.
- 8           **1993** Recipient, Second Annual Vin Jorgensen Award for volunteer  
9           service and commitment to Hoag Hospital through foundation  
10          programs.
- 11          **1993** Chair, Ticket Sales for the 1993 Christmas Carol Ball fund raiser  
12          for Hoag Hospital.
- 13          **1993** Member, American Dental Association OSHA Task Force.
- 14          **1992-1995** Member, Academy of Prosthodontics Photography Committee  
15          and History and Records Committee.
- 16          **1992-1995** Board of Directors, Hoag Memorial Hospital Foundation 552  
17          Club.
- 18          **1992-1995** Associate Editor, *Journal of Prosthodontics*.
- 19          **1992-1994** Member, American Dental Association Council on Dental  
20          Research.
- 21          **1992-1994** Chairman, American College of Prosthodontists Liaison to  
22          the ADA House of Delegates Committee.
- 23          **1992-1993** Member, American College of Prosthodontists Ad Hoc Chicago  
24          Office Committee.
- 25          **1992-1993** Chairman, American College of Prosthodontists Nominating  
26          Committee.
- 27          **1992-1993** President, Pacific Coast Society of Prosthodontists.
- 28          **1992-1993** Member, Academy of Prosthodontics President's Advisory  
Committee.
- 29          **1992** President, American College of Prosthodontists Education  
30          Foundation.
- 31          **1991-1995** Member, Annual Program Planning Committee, American  
32          Academy of Fixed Prosthodontics.

- 1           **1991-1992** Member, American College of Prosthodontists Ad Hoc  
2           Committee for Strategic Planning.  
3           **1991-1992** President, American College of Prosthodontists.  
4           **1991-1992** Chair, Strategic Planning Committee, Pacific Coast Society of  
5           Prosthodontists.  
6           **1991-1992** President-Elect, Pacific Coast Society of Prosthodontists.  
7           **1991** Member, American College of Prosthodontists Nominating  
8           Committee  
9           **1991** Member, American College of Prosthodontists Ad Hoc  
10          Committee to Review the Annual Session  
11          **1990-1993** Member, Academy of Prosthodontics Current Issues Committee.  
12          **1990-1991** President-Elect, American College of Prosthodontists  
13          **1990-1991** Member, Pacific Coast Society of Prosthodontists Policy  
14          Committee  
15          **1990-1991** Chair, Pacific Coast Society of Prosthodontists Constitution &  
16          By-Laws Committee  
17          **1990-1991** Vice-President, Pacific Coast Society of Prosthodontists.  
18          **1990** Chair, Pacific Coast Society of Prosthodontists Scientific  
19          Program Committee.  
20          **1989-1992** Chairman, American College of Prosthodontists Education  
21          Foundation Prosthodontic Nomenclature Committee.  
22          **1989-1992** Chairman, California Dental Association Council on Dental  
23          Research and Developments.  
24          **1989-1992** Member, Federation of Prosthodontic Organizations Recruitment  
25          and Retention Committee.  
26          **1989-1991** Chairman, American College of Prosthodontists Education  
27          Foundation Ad Hoc Committee for Prosthodontic Education of  
28          Health Professionals.  
29          **1989-1991** Chairman, Orange County Dental Society Program Committee.  
30          **1989-1991** Member, American College of Prosthodontists Education  
31          Foundation Constitution and By-Laws Committee.  
32          **1989-1991** Federation of Prosthodontic Organizations/American College of

- 1 Prosthodontists ADA Specialty Council.
- 2 **1989-1991** Chair, American College of Prosthodontists Budget Committee.
- 3 **1989-1990** Vice-President, American College of Prosthodontists.
- 4 **1988-1994** American College of Prosthodontists Delegate to the Federation  
5 of Prosthodontic Organizations.
- 6 **1988-1993** Member, Board of Directors, American College of  
Prosthodontists Education Foundation.
- 7 **1988-1991** Member, American College of Prosthodontists Peer Review  
8 Committee.
- 9 **1988-1991** Member, Federation of Prosthodontic Organizations Nominating  
10 Committee.
- 11 **1988-1990** Secretary, Pacific Coast Society of Prosthodontists.
- 12 **1988-1989** Secretary, American College of Prosthodontists.
- 13 **1988-1989** Member, Orange County Dental Society Budget and Finance  
Committee.
- 14 **1988** Consultant, Academy of Denture Prosthetics Current Issues  
15 Committee.
- 16 **1988** Pierre Fauchard Academy Nominations Committee.
- 17 **1987** Chairman, Local Arrangements Committee, Pacific Coast  
18 Society of Prosthodontists 1987 Annual Meeting.
- 19 **1986-1989** Member, California Dental Association Council on Dental  
Research and Developments.
- 20 **1986-1987** Member, American College of Prosthodontists Ad Hoc  
21 Committee to Search for an Executive Director.
- 22 **1985-1988** Executive Councilor, American College of Prosthodontists.
- 23 **1985-1986** Member, American College of Prosthodontists Ad Hoc  
24 Committee for the Evaluation of Specialty Listing by Non-  
Specialists
- 25 **1985-1986** Member, California Dental Association Interdisciplinary Affairs  
26 Committee.
- 27 **1985** Member, California Dental Association Reference Committee on  
28 Dental Care for the 1985 House of Delegates.

- 1           **1984-1992** Pacific Coast Society of Prosthodontists Annual Session  
2           Registration.
- 3           **1984-1989** Editor, Pacific Coast Society of Prosthodontists Newsletter.
- 4           **1984-1988** Chairman, American College of Prosthodontists National Peer  
5           Review Committee.
- 6           **1984-1987** Executive Councilor, Pacific Coast Society of Prosthodontists.
- 7           **1984-1987** Member, Federation of Prosthodontic Organizations Oral Health  
8           Committee.
- 9           **1984-1986** Member, Orange County Dental Society Budget, Audit, and  
Finance Committee
- 10          **1984-1986** Member, American College of Prosthodontists Ad Hoc  
Committee for Computer Utilization.
- 11          **1984-1985** President, American College of Prosthodontists California  
Section.
- 12          **1984** Chairman, Committee on Rules and Order, California Dental  
Association House of Delegates.
- 13          **1984** Senior Orange County Dental Society Delegate to the California  
Dental Association House of Delegates.
- 14          **1983-1985** Member, Constitution and By-Laws Committee, Pacific Coast  
Society of Prosthodontists.
- 15          **1983-1984** Vice President, American College of Prosthodontists California  
Section.
- 16          **1983** Member – Delta Dental Plan of California Superiority of Service  
Panel.
- 17          **1982-1988** Chairman, Dental Care Committee, Orange County Dental  
Society.
- 18          **1982-1987** Delegate to the California Dental Association House of  
Delegates.
- 19          **1982-1983** Liaison for the Orange County Dental Society to the Auxiliary of  
the Orange County Dental Society.
- 20          **1981-1985** Member, Orange County Dental Society Public Relations  
Committee.
- 21          **1981-1983** Secretary, American College of Prosthodontists California

## Section.

**1981-1982** West Coast Spokesperson, Dental Gold Institute.

**1981-1982** Secretary, Orange County Dental Society.

**1981** Chairman, Prosthodontic Peer Review Committee, American College of Prosthodontists California Section.

**1980-1986** Chairman, Prosthetic Dental Care Programs Committee,  
American College of Prosthodontists.

1980 Board Member at Large, Orange County Dental Society.

1979-1983 Faculty, Odontic Seminar, U.S.C. School of Dentistry.

1979-1980 Chairman, Program Committee, Orange County Dental Society.

**1977-1979** Chairman, Continuing Education Committee, Orange County Dental Society.

**1976-1979** Member, Continuing Education Committee, American College of Prosthodontists.

### **III. INFORMATION RELIED UPON**

The documents and references I considered in forming my opinions are listed below. I also relied upon my experience, education and the knowledge I have acquired in my 42 years of involvement in the dental industry.

I reviewed the documents and things that have been produced during discovery with Bates numbers KDA-001500 through KDA-002467. I found the following videos and documents, cited in this report, to be supportive of my opinions along with many of the other articles and documents reviewed:

Dorland's Illustrated Medical Dictionary, 32nd Edition, 2012.

Nikolaos Tsiggos, D.D.S, Ph.D., et al.: Association between self-reported bruxism activity and occurrence of dental attrition, abfraction, and occlusal pits on natural teeth. *Journal of prosthetic dentistry*, Jul 2008.

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1           Emily R. Tolley, D.D.S.: The Efficacy of the Bitestrip® in Determining  
2 Patients Awareness of Nocturnal Bruxism. Thesis submitted to the School of  
3 Dentistry, West Virginia University, 2007.

4           Robin A. Carden: A Changing Direction in Dentistry: Full-Contour  
5 Zirconia. *Journal of Dental Technology*, February 2011.

6           Yasuhiro Ono, D.D.S., et al.: The Effects of Sleep Bruxism On Periodontal  
7 Sensation and Tooth Displacement in the Molar Region. *The Journal of*  
8 *Craniomandibular Practice*, Oct. 2008.

9           Christine Schneider, et al.: Maladaptive Coping Strategies in Patients with  
10 Bruxism Compared to Non-Bruxing Controls. *International Journal of Behavioral*  
11 *Medicine* 4: 257-61, 2007

12           Takeshi Saganuma, D.D.S., Ph.D., et al.: The Effect of Bruxism On  
13 Periodontal Sensation in the Molar Region: A Pilot Study. *The Journal of*  
14 *Prosthetic Dentistry*, July 2007

15           Omar Franklin Molina D.D.S., M.S., et al.: A Clinical Study of Specific  
16 Signs and Symptoms of CMD in Bruxers Classified by the Degree of Severity.  
17 *The Journal of Craniomandibular Practive*, January 1999.

18  
19           The following documents available online:

20           Robin A. Carden: “BruxZir: Virtually Bulletproof” available at  
21 [http://www.glidewelldental.com/dentist/education/bruxzir-virtually-](http://www.glidewelldental.com/dentist/education/bruxzir-virtually-bulletproof.aspx)  
22 bulletproof.aspx (Bates number KDA-002222-002226).

23           “Metal-Free Restoration Guide” available at  
24 <http://www.assureddentallabinc.com/prep.html> (Bates number KDA-002172-  
25 002173).

26           “Axis Dental Milling: Bruxzir Full Contour Dental Milling” available at  
27 <https://www.axisdentalmilling.com/bruxzir.html> (Bates number KDA-002174-  
28 002175).

1        “All Ceramic: All Zirconia for Bruxers” available at  
2        <http://www.chinadentaloutsourcing.com/p-ceramic-bruxer.html> (Bates number  
3        KDA-002237-002240).  
4        “BruxZir®: Crown Dental Studio” available at  
5        <http://www.crowndentalstudio.com/BruxZir.html> (Bates number KDA-002242-  
6        002244).  
7        “Infinity Dental Laboratory: Help your dental lab grow!” available at  
8        <http://www.infinitylaboratory.com/5073/5094.html> (Bates number KDA-002341).  
9        “Keller Laboratories: BruxZir®” available at  
10      <http://www.kellerlab.com/193/products/bruxzir.php> (Bates number KDA-002343-  
11      002344).  
12      “Showcase Dental Laboratories: News” available at  
13      <http://www.showcasedental.com/about/events/html> (Bates number KDA-002361).  
14      “Fixed Cosmetics RX” available at <http://www.mascolaesthetics.com>  
15      (Bates number KDA-002444).  
16      “Bruxer” available at <http://yorkdentallab.com/fixed/bruxzer> (Bates number  
17      KDA-002445).  
18      “Z-Brux Crowns: Bruxzir: Solid Zirconia – Barth Dental Lab” available at  
19      <http://www.barthlab.com/dental-lab-products/z-brux-crown/> (Bates number KDA-  
20      002446-002447).  
21  
22      Videos available online which have been produced with the following  
23      Bates numbers: KDA-002460 through KDA-002467. These include:  
24      “Introduction to BruxZir Total Zirconia” uploaded Oct 20, 2009 by  
25      glidewelldental and available at  
26      [http://www.youtube.com/watch?v=tUpp\\_DOY4Vw&feature=plcp](http://www.youtube.com/watch?v=tUpp_DOY4Vw&feature=plcp).  
27      / / /  
28      / / /

“BruxZir® Solid Zirconia Patient Education” uploaded on Jul 24, 2012 by  
glidewelldental and available at  
[http://www.youtube.com/watch?v=D4taHSdbP\\_w&feature=plcp](http://www.youtube.com/watch?v=D4taHSdbP_w&feature=plcp).

“Clinical Case: The Pursuit of BruxZir® Esthetics: Anterior Crowns #8 & #9” uploaded on Aug 22, 2012 by glidewelldental and available at <http://www.youtube.com/watch?v=GzKZbiOXio0&feature=plcp>.

“Hammer Test: BruxZir® vs PFM” uploaded on Dec 23, 2010 by  
glidewelldental and available at  
<http://www.youtube.com/watch?v=2ZRfQK6Ipbo&feature=plcp>.

“BruxZir e.max comparison” uploaded May 13, 2011 by greendental and available at <http://www.youtube.com/watch?v=MXW6WCvV0QQ>.

“BruxZir Total Zirconia Crown” uploaded Jan 31, 2011 by greendental and available at <http://www.youtube.com/watch?v=83CsrlrNcCI>.

“How To Adjust the Bruxzir Crown” uploaded Feb 18, 2011 by RDentLab and available at <http://www.youtube.com/watch?v=sTTwU1LDvjU>.

“BruxZir Removal” uploaded Jul 1, 2012 by artisticdental and available at <http://www.youtube.com/watch?v=zzcPbCciiuA>.

#### IV. OPINIONS TO BE EXPRESSED

Within the dental profession and related fields, the term “bruxism” is used to describe a condition in which a patient grinds their teeth, or bruxes their teeth. These patients are routinely referred to as bruxers. One challenge in treating these patients is providing a crown or bridge that is strong enough to prevent catastrophic fracture. In these instances, an all zirconia restoration can be useful due to its high strength. However, restorations made entirely of zirconia have disadvantages that make them undesirable for patients other than bruxers. This has resulted in a strong correlation in the dental industry between dental crowns made entirely of zirconia and bruxers.

1           In my opinion, the following are generally accepted facts in the dental  
2 profession:

- 3           A. A bruxer is a generic term used to describe a person with the condition  
4           of bruxism.  
5           B. The mark BRUXZIR is phonetically equivalent to the term “bruxer.”  
6           C. The primary indication for an all zirconia crown, or bruxer crown, is  
7           patients with bruxism.  
8           D. Dentists and other professionals in the dental industry refer to an all  
9           zirconia crown as a “bruxer crown” or alternatively a “bruxzir crown.”

10          A. **A bruxer is a generic term used to describe a person with the condition**  
11          **of bruxism.**

12          According to Dorland’s Illustrated Medical Dictionary (32<sup>nd</sup> Edition, 2012),  
13 bruxism is defined as “involuntary, nonfunctional, rhythmic, or spasmodic  
14 gnashing, grinding, and clenching of teeth.” Additionally, “brux” is defined as  
15 “to grind the teeth rhythmically or spasmodically.” Within the dental profession a  
16 bruxer is known as a patient with the condition of bruxism. During my  
17 preparation for this report I reviewed many scholarly articles referring to  
18 “bruxism” and “bruxers” illustrating the generic nature of these terms. These are  
19 words that are used routinely and frequently within the dental profession and have  
20 been so throughout my 42 years in dentistry.

21          The following examples are illustrative of the frequent generic use of  
22 “bruxer” and “bruxism.” An article titled “Association Between Self-Reported  
23 Bruxism Activity and Occurrence of Dental Attrition, Abfraction, and Occlusal  
24 Pits on Natural Teeth” which was published in the *Journal of Prosthetic Dentistry*  
25 in July 2008 reports on a study in which the participants were divided into groups  
26 of bruxers and non-bruxers. The reported clinical implication from the study is  
27 that “the use of a bruxism awareness questionnaire . . . may be used to  
28 differentiate self-reported bruxers from nonbruxer subjects.” (Emphasis added).

1 All dental professionals would readily understand the meaning of the term bruxer  
2 and nonbruxer used here.

3 Another example comes from the thesis submitted by Emily R. Tolley,  
4 DDS for her Master of Science in Prosthodontics degree from West Virginia  
5 University. The thesis is titled “The Efficacy of the BiteStrip in Determining  
6 Patients Awareness of Nocturnal Bruxism.” It concludes that “the BiteStrip  
7 demonstrated 70% of the patients *registered as bruxers*. A fairly high percentage  
8 of *those who scored as bruxers* with the BiteStrip® were unaware that they did  
9 brux.” (Emphasis added). Once again, this terminology is used because it is  
10 readily understood by dental professionals.

11 In another example, Robin A. Carden, the senior director of research and  
12 development at Glidewell Laboratories, published an article in the *Journal of*  
13 *Dental Technology* in February 2011 titled “A Changing Direction in Dentistry:  
14 Full-Contour Zirconia.” Speaking of full-contour zirconia restorations, Mr.  
15 Carden states, “Primary candidates include bruxers and grinders who do not  
16 desire cast gold or metal occlusal PFM restorations.”

17 Additionally, many studies on bruxism divide test subjects into different  
18 groups and differentiate them as being bruxers or non-bruxers. Examples include:  
19 “The Effect of Bruxism on Periodontal Sensation in the Molar Region: A Pilot  
20 Study” by Takeshi Saganuma, et al. which was published in *The Journal of*  
21 *Prosthetic Dentistry* in July of 2007; “Maladaptive Coping Strategies in Patients  
22 with Bruxism Compared to Non-Bruxing Controls” by Christine Schneider, et al.  
23 which was published in *International Journal of Behavioral Medicine* in 2007;  
24 and “Effects of Sleep Bruxism on Periodontal Sensation and Tooth Displacement  
25 in the Molar Region” by Yasuhiro Ono, et al. which was published in *The Journal*  
26 *of Craniomandibular Practice* in October 2008. Bruxers can even be categorized  
27 based on the severity of the bruxism as was done in a study by Omar Franklin  
28 Molina D.D.S. et al. titled “A Clinical Study of Specific Signs and Symptoms of

1      CMD in Bruxers Classified by the Degree of Severity” which was published in  
2      *The Journal of Craniomandibular Practice* in 1999. In each of these examples,  
3      the term “bruxer” is used generically and throughout the study to identify a group  
4      of subjects that suffers from the condition of bruxism.

5      These are just a few representative examples. I reviewed many more and  
6      have personal knowledge of the use of these terms in my own dental practice,  
7      education and experience. It is my opinion that the term bruxer is a generic term  
8      to refer to patients with the condition of bruxism.

9      **B. The mark BRUXZIR is phonetically equivalent to the term “bruxer.”**

10     The mark BRUXZIR is pronounced equivalent to the term “bruxer.” It is  
11    evident from the mark BRUXZIR that the first syllable “brux” is similar to  
12    bruxism or bruxer and should be pronounced the same. Likewise, it is evident  
13    that the second syllable “zir” comes from zirconia, which refers to zirconium  
14    oxide, the material from which the BRUXZIR product is made. Thus BRUXZIR  
15    is pronounced by combining the first syllable of “bruxism” with the first syllable  
16    of “zirconia.” This results in a mark that is pronounced the same as “bruxer.”

17     The conclusion that BRUXZIR is pronounced the same as bruxer is  
18    demonstrated in the promotional videos which Glidewell has made available  
19    online through their channel on YouTube.com. In these videos, the mark  
20    BRUXZIR is verbalized many times, and in each instance, it is pronounced as a  
21    phonetic equivalent to the word “bruxer.” It is my opinion that the trademark  
22    BRUXZIR is phonetically equivalent to the word “bruxer.”

23     **C. The indication for an all zirconia crown, or bruxer crown, is patients  
24       with bruxism.**

25     Bruxer crowns, made entirely of zirconia, are the strongest crowns  
26    available in dentistry, and therefore the treatment of choice for patients who are  
27    bruxers. In contrast to the advantage of strength, the other properties of zirconia  
28    are a detriment. Bruxer crowns are very opaque and unsuitable for the anterior

1 teeth. The extreme hardness makes them difficult to remove if a misfit is  
2 discovered after cementation, or to adjust the occlusion, or to cut through for  
3 endodontic access.

4 Bruxers will put up with the opacity of zirconia to get the needed strength.  
5 However, non bruxers do not need the strength and they prefer the more  
6 translucent restorative materials.

7 To reiterate, there are significant disadvantages to the use of zirconia. 1) The opacity of the material looks very different from a real tooth. While zirconia  
8 is more aesthetic than a gold crown, it is less aesthetic than any other type of  
9 crown. 2) Due to its strength, a bruxer crown is extremely hard to remove which  
10 adds complications when removal becomes necessary. 3) The hardness also  
11 creates difficulty for endodontic access during a root canal procedure.  
12

13 In my review of literature on the subject, the indication given for a bruxer  
14 crown is “for bruxers and grinders.” For example, on Glidewell Laboratories  
15 website, [glidewell.com](http://glidewell.com), there is an article titled, “BruxZir: Virtually Bulletproof”  
16 which states, “These innovations led to the development of BruxZir Solid  
17 Zirconia, which is indicated for bruxers and grinders as an esthetic posterior  
18 alternative to metal occlusal PFM’s or cast-metal restorations.” No other  
19 indications are mentioned. Also, Barth Dental Laboratories advertises a solid  
20 zirconia crown they call the Z-Brux Crown in which they state, “Chip resistant  
21 quality makes Z-Brux *ideal for bruxers.*” (Emphasis added).

22 Other examples include: Keller Laboratories website for a BruxZir crown  
23 stating “Ideal for bruxers & grinders who have destroyed other restorations.”  
24 (<http://www.kellerlab.com/193/products/bruxzir.php>); Axis Dental Milling states  
25 on their website, “The chip proof durability of BruxZir is ideal for bruxers who  
26 have broken natural teeth or previous PFM restorations.”  
27 (<https://www.axisdentalmilling.com/bruxzir.html>); Crown Dental Studio states,  
28 “Ideal for bruxers & grinders who have destroyed other restorations”

1 (http://www.crowndentalstudio.com/bruxzir.html); Assured Dental Lab states,  
2 Patient a grinder or Bruxer: Use IPS e.max Bruxer crown.”

3 (http://www.assureddentallabinc.com/prep.html). These are, once again, only  
4 representative examples as there are many throughout the dental literature.

5 In my opinion the only indication for an all zirconia crown is bruxers --  
6 patients with the condition of bruxism, along with the rare patient with potential  
7 allergies to other restorative materials. When the level of hardness that zirconia  
8 provides is not necessary, there are other options available that are more  
9 advantageous.

10 **D. Dentists and other professionals in the dental profession refer to an all**  
11 **zirconia crown as a “bruxer crown” or alternatively a “bruxzir**  
12 **crown.”**

13 Due to their association with the treatment of bruxers, a crown made  
14 entirely with zirconia is referred to by dentists and other dental professionals as a  
15 bruxer crown, or alternatively a bruxzir crown. In reviewing many materials that  
16 are found online, advertisements by Glidewell Laboratories, Keating Dental Arts,  
17 and other labs, as well as prescription orders that have been placed with dental  
18 labs, I found numerous examples of dental professionals using the term bruxer  
19 crown, or alternatively bruxzir crown, to refer generically to a crown made of all  
20 zirconia. As an example, RDent Dental Laboratory, Inc. located in Tennessee has  
21 uploaded an informational video on YouTube.com entitled “How to Adjust the  
22 Bruxzir Crown.” In this video, a dentist refers to an all zirconia crown and states,  
23 “some laboratories call it bruxer crown, we call it the RBrux crown.” As  
24 discussed above, the terms bruxer and bruxzir sound exactly the same, so one  
25 cannot distinguish between the two when heard in video or conversation. This  
26 has led to some dental professionals using the spelling “bruxzir” while others  
27 spell the term “bruxer” when referring to the generic term bruxer crown.

28 ///

1        Through their advertisement and promotional material, Glidewell  
2 Laboratories has reinforced the nomenclature for an all zirconia crown being a  
3 bruxzir crown, or alternatively as a phonetic equivalent, a bruxer crown. For  
4 example, in their promotional video entitled “Introduction to BruxZir Total  
5 Zirconia,” they start by stating, “Bruxzir is a 100% zirconia crown.” This  
6 indicates that bruxzir is a type of product and does not identify a particular  
7 manufacturer. Later in the video a bruxzir crown is compared to a metal occlusal  
8 PFM crown and a gold cast crown. These are generic names for types of crowns  
9 with which all dentists are very familiar. The video discusses the disadvantages  
10 of these crowns and then states, “Well enter bruxzir. Let’s take a look at how  
11 bruxzir fits into all this.” Once again there is no indication of a particular  
12 manufacturer or that the product is called anything other than a bruxzir crown.  
13 Later, the video compares a bruxzir crown to other crowns that are shown in a  
14 patient’s mouth. It states, “You can see in this case that the bruxzir crown blends  
15 in reasonably well with the adjacent teeth. You can see the gold crown behind it  
16 stands out a lot more and even the PFM across from it does not blend in  
17 perfectly.” Glidewell is using the term bruxzir crown alongside other generic  
18 terms for types of crowns such as gold crowns and PFMs. Throughout all of  
19 Glidewell’s videos that discuss and promote the bruxzir crown, there is consistent  
20 use of the term bruxzir referring generically to a bruxzir crown, which sounds  
21 identical to a “bruxer crown,” or a crown made to treat bruxers.

22        Glidewell’s print and online advertisements and promotional material also  
23 describe bruxzir as a type of product. Even when the ® symbol is used, BruxZir  
24 is still identified as a type of product and does not identify a manufacturer.  
25 Likewise, many other labs use “bruxer” or some variation, as the name of their all  
26 zirconia products. Examples include: York Dental Lab offers a “Bruxer” crown;  
27 Barth Dental Lab offers a “Z-Brux” crown; Mascola Esthetics Dental Lab offers a  
28 “Xtreme Bruxer”; Showcase Dental Lab previously offered a “Zir-Bruxer”

1 Crown"; RDent Laboratory has offered a "R-Brux crown"; Infinity Dental Lab  
2 has offered a "Bruxer Crown"; Assured Dental Lab recommends "IPS e.max  
3 Bruxer crown" when a patient is a grinder or Bruxer; and China Dental  
4 Outsourcing, a U.S. company, offers an "All Zirconia for Bruxers." Each is an  
5 example of the dental industry using the term bruxer crown to denote a type of  
6 product and not a specific brand.

7 Additionally, I reviewed a number of laboratory orders sent to Keating  
8 Dental Arts in which the dentist ordered a "bruxzir," "bruxir," "bruxzer," or  
9 "bruxer" crown. This is further evidence that these alternate spellings are all  
10 generic variations for a bruxer crown. When a dentist orders a product from a  
11 dental lab, he or she must select the prescription form for that lab from many  
12 different prescription forms that are available. Dentists often use more than one  
13 lab for the full range of services they offer which requires them to ensure they are  
14 selecting the prescription form for the lab from which they intend to order. These  
15 prescription forms often vary greatly in color, physical orientation, organization,  
16 and/or size. Dentists know there are different forms and, as part of their dental  
17 practice, know they must select the correct form to get the product they desire.  
18 This makes it unlikely that a dentist would intend to order a product from  
19 Glidewell, for example, but fill out Keating Dental Arts' prescription form. Thus,  
20 a dentist using an alternative spelling such as "bruxzir" or "bruxzer" when they  
21 order a KDZ Bruxer would indicate a generic use of that term and the spelling  
22 used.

23 In my opinion, dentists and other professionals in the dental profession  
24 refer to an all zirconia crown as a "bruxer crown" or alternatively a "bruxzir  
25 crown."

26 / / /

27 / / /

28 / / /

**V. SUPPLEMENTATION AND REBUTTAL**

I understand discovery is ongoing and I reserve the right to supplement this report and to offer opinions in my area of competence on the additional information. And to the extent that the plaintiff offers any opinions in my area of competence to which I disagree, I expect I may comment on these opinions. In addition, to the extent subsequent developments may have a bearing on my opinions; I expect I may supplement this report to take those developments into consideration.

**VI. PRIOR TESTIMONY**

In the preceding four years I have testified in depositions or in court on the following:

Meridith Riley v Ronald Rosenblatt, DDS. Superior Court, County of Los Angeles, Case # SC109670. My deposition was on October 28, 2011. I was an expert for the plaintiff. Dental malpractice case

Ingrid Valdez & Barry Cosgrove v Sherri Worth, DDS. Arbitration at Judicate West. Judgment in Conformity in Superior Court, County of Orange. Case #30-2010-00348533. I testified at the arbitration hearing in November, 2011. My second volume of deposition was on October 21, 2011.

**VII. ARTICLES AND PAPERS**

•Eggleston DW: Advantages and use of the remount for fixed prosthodontics. *Journal of Prosthetic Dentistry* 43:627-33, 1980.

•Eggleston DW: The interrelationship of stress and degenerative diseases. *Journal of Prosthetic Dentistry* 44:541-4, 1980.

•Eggleston DW: Biocompatibility of base metal alloys for dental restorations. *Orange County Dental Society Impressions* 1:6-7, February, 1981.

- 1                   •Eggleson DW: CDS procedure codes for casting alloys for porcelain  
2 veneering. *Orange County Dental Society Impressions* 3:11-5, September, 1982.
- 3                   •Eggleson DW: Preferred Provider Organizations (P.P.O's). *Orange*  
4 *County Dental Society Impressions* 5:8-10, April, 1984; *The American College of*  
5 *Prosthodontists Newsletter* 12:2-3, Spring, 1984.
- 6                   •Eggleson DW: Effect of dental amalgam and nickel alloys on T-  
7 lymphocytes: Preliminary report. *Journal of Prosthetic Dentistry* 51:617-23, May,  
8 1984.
- 9                   •Sullivan SG, Eggleson DW, Martinoff JT, Kroening RJ: The blind  
10 measurement of evoked electrical conductivity on the lung acupuncture points in  
11 healthy individuals and confirmed lung cancer patients: a research evaluation.  
12 *American Journal of Acupuncture* 13:261-6, September, 1985.
- 13                   •Strauss FG, Eggleson DW: IgA nephropathy associated with dental nickel  
14 alloy sensitization. *American Journal of Nephrology*, 5:395-7, 1985.
- 15                   •Eggleson DW, Nylander M, Suffin SC, Martinoff JT, Rieders MF:  
16 Correlation of dental amalgam with mercury in brain tissue. *Journal of the*  
17 *California Dental Association* 15:39, 1987. *Journal of Prosthetic Dentistry*  
18 58:704-707, December, 1987.
- 19                   •Eggleson DW: A sign of the times, transition of dental infection control  
20 techniques. *Journal of the California Dental Association* 17:44-5, August, 1989.
- 21                   •Eggleson DW: Dental Amalgam: A Review of the Literature. *The*  
22 *Compendium of Continuing Education in Dentistry*, 10(9):500-5, September,  
23 1989.
- 24                   •Nylander M, Friberg L, Eggleson D, Bjorkman L: Mercury accumulation  
25 in tissues from dental staff and controls in relation to exposure. *Swedish Dental*  
26 *Journal* 13(6):235-43, November-December, 1989.
- 27                   •Eggleson DW: Caution on Amalgam Issue. *CDA Update* 3(1):2,12,  
28 January 15, 1991.

1           •Eggleston DW: Medical Waste Management in a Dental Office. *Dentistry*  
2        *Today* 11(6):38-9, August, 1992.

3           •Eggleston DW: Improved Laboratory Results for Fixed Restorations Using  
4        Sequential Tooth Preparation. *Journal of Prosthodontics*, 9:47-49, March, 2000.

5           •Eggleston DW: "Gummy Smiles," Biologic Width and Laser Surgery: A  
6        Patient Study. *Orange County Dental Society Impressions*. 29-35 March/April,  
7        2012.

8

9           **VIII. COMPENSATION**

10          I am being compensated for the time I have spent working on this matter at  
11        my standard rate of \$500 per hour during office hours and during deposition  
12        testimony, and \$350 per hour to review materials and during hours outside of my  
13        normal office hours.

14

15          I declare under the penalty of perjury that the above is true and correct.

16          Dated: September 14, 2012 at Irvine, California.

17

18            
19

20          Dr. David W. Eggleston

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**PROOF OF SERVICE**

I am a citizen of the United States of America and I am employed in Irvine, California. I am over the age of 18 and not a party to the within action. My business address is 2040 Main Street, Fourteenth Floor, Irvine, California. On September 15, 2012, I caused the within **EXPERT REPORT OF DR. DAVID W. EGGLESTON** to be served on the parties or their counsel shown below, by placing it in a sealed envelope addressed as follows:

VIA Email and First Class Mail

Leonard Tachner, Esq.  
LEONARD TACHNER, A Professionals Law Corp.  
17961 Sky Park Circle, Suite 38-E  
Irvine, CA 92614-6364  
Email: ltachner@aol.com

I declare that I am employed in the office of a member of the bar of this Court at whose direction the service was made.

Executed on September 15, 2012 at Irvine, California.

P. Toller  
Peter Toller